

Sub 027 1. A method of identifying data loss in a transmission system, comprising:

shifting one of a received waveform and a transmitted waveform;

5 determining differences between the transmitted and received waveforms at various shift points; and

identifying a smallest of the differences between the transmitted and received waveforms.

10 2. The method of claim 1, further comprising:  
generating a plot of the differences relative to the shift points;

wherein the smallest of the differences comprises a low vertex point on the plot.

15 3. The method of claim 1, wherein shifting comprises:  
moving the transmitted waveform relative to the received waveform in a first direction; and

20 moving the transmitted waveform relative to the received waveform in a second direction.

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4. The method of claim 1, wherein shifting comprises:  
moving the received waveform relative to the transmitted  
waveform in a first direction; and  
moving the received waveform relative to the transmitted  
5 waveform in a second direction.

5. The method of claim 1, wherein an odd number of shift  
points make up the plot.

10 6. The method of claim 1, further comprising:  
normalizing the transmitted and received waveforms so  
that the transmitted and received waveforms contain positive  
data.

15 7. The method of claim 1, wherein the transmitted and  
received waveforms comprise audio data.

20 8. The method of claim 1, wherein the transmission  
system comprises a transmitter, a transmission medium, and a  
receiver.

9. The method of claim 1, wherein the shift points are defined in terms of time in the transmitted and received waveforms.

5 10. The method of claim 1, wherein the shift points are defined in terms of data samples in the transmitted and received waveforms.

10 11. An article comprising a machine-readable medium that stores executable instructions for identifying data loss in a transmission system, the instructions causing a machine to:

shift one of a received waveform and a transmitted waveform;

determine differences between the transmitted and received waveforms at various shift points; and

identify a smallest of the differences between the transmitted and received waveforms.

12. The article of claim 11, further comprising instructions that cause the machine to:

generate a plot of the differences relative to the shift points;

wherein the smallest of the differences comprises a low vertex point on the plot.

13. The article of claim 11, wherein shifting comprises:  
5 moving the transmitted waveform relative to the received waveform in a first direction; and  
moving the transmitted waveform relative to the received waveform in a second direction.

10 14. The article of claim 11, wherein shifting comprises:  
moving the received waveform relative to the transmitted waveform in a first direction; and  
moving the received waveform relative to the transmitted waveform in a second direction.

15 15. The article of claim 11, wherein an odd number of shift points make up the plot.

20 16. The article of claim 11, further comprising instructions that cause the machine to:  
normalize the transmitted and received waveforms so that the transmitted and received waveforms contain positive data.

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17. The article of claim 11, wherein the transmitted and received waveforms comprise audio data.

18. The article of claim 11, wherein the transmission system comprises a transmitter, a transmission medium, and a receiver.

19. The article of claim 11, wherein the shift points are defined in terms of time in the transmitted and received waveforms.

20. The article of claim 11, wherein the shift points are defined in terms of data samples in the transmitted and received waveforms.

21. An apparatus for identifying data loss in a transmission system, comprising:

a memory that stores executable instructions; and

a processor that executes the instructions to:

shift one of a received waveform and a transmitted waveform;

determine differences between the transmitted and received waveforms at various shift points; and

identify a smallest of the differences between the transmitted and received waveforms.

22. The apparatus of claim 21, wherein the processor  
5 executes instructions to:

generate a plot of the differences relative to the shift points;

wherein the smallest of the differences comprises a low vertex point on the plot.

23. The apparatus of claim 21, wherein shifting  
comprises:

moving the transmitted waveform relative to the received waveform in a first direction; and

moving the transmitted waveform relative to the received waveform in a second direction.

24. The apparatus of claim 21, wherein shifting  
comprises:

moving the received waveform relative to the transmitted waveform in a first direction; and

moving the received waveform relative to the transmitted waveform in a second direction.

25. The apparatus of claim 21, wherein an odd number of shift points make up the plot.

5 26. The apparatus of claim 21, wherein the processor executes instructions to:

normalize the transmitted and received waveforms so that the transmitted and received waveforms contain positive data.

10 27. The apparatus of claim 21, wherein the transmitted and received waveforms comprise audio data.

15 28. The apparatus of claim 21, wherein the transmission system comprises a transmitter and a transmission medium, and the apparatus comprises a receiver that is capable of receiving the received waveform over the transmission medium.

20 29. The apparatus of claim 21, wherein the shift points are defined in terms of time in the transmitted and received waveforms.

30. The apparatus of claim 21, wherein the shift points  
are defined in terms of data samples in the transmitted and  
received waveforms.

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